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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,522	07/11/2003	Tom Etheridge	200210053-1	5065

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FORT COLLINS, CO 80527-2400

EXAMINER

TALBOT, BRIAN K

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/618,522

Applicant(s)

ETHERIDGE, TOM

Examiner

Brian K. Talbot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-27 and 35 is/are pending in the application.
- 4a) Of the above claim(s) 26 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 9-25 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The amendment filed 7/3/06 has been considered and entered. Claims 1-8 and 28-34 have been canceled. Claim 35 has been added. Claims 9-27 and 35 remain in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. This application contains claims 26 and 27 drawn to an invention nonelected with traverse in Paper filed 5/10/05. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 103

4. Claims 9-25 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuttle (3,896,252) or Gedrat et al. (4,285,991) in combination with Miller (4,668,533).

Tuttle (3,896,252) teaches a process of metal plating on plastics comprising laminating the substrate by contacting with a diaminopropane in a solvent, contacting the treated substrate with a noble metal salt (including palladium) and finally contacting the palladium treated substrate with a reducing agent to form a catalyst layer. The catalyst layer is further plated in an electroless plating process (abstract).

Gedrat et al. (4,285,991) teaches method for producing printed circuits whereby a substrate (plate) is contacted with an activating solution comprising a palladium complex and

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afterwards the substrate having the palladium complex thereon is treated with a reducing solution. Finally a metal coating can be formed thereon (col. 4, line 10 – col. 5, line 55)

Tuttle (3,896,252) or Gedrat et al. (4,285,991) fail to teach the process utilized to form electrically conductive pathways as well as applying the palladium and reducing solution by ink-jetting.

Miller (4,668,533) teaches ink jet printing of substrates to form circuits for the manufacturing of printed circuit boards. Ink jetting is utilized to apply sensitizers and activators (i.e. catalysts) on the substrates in patterns prior to contacting with electroless plating to form the circuits (abstract and col. 2, line 25 – col. 3, line 45).

Therefore, it would have been obvious for one skilled in the art at the time the invention was made to have modified Tuttle (3,896,252) or Gedrat et al. (4,285,991) process to manufacture circuitry by ink-jet printing as evidenced by Miller (4,668,533) with the expectation of achieving similar success.

It is noted that in Tuttle (3,896,252) a complex is applied separately from the metal as opposed to being applied as a single solution as claimed and done in Gedrat et al. (4,285,991). While the Examiner acknowledges this fact, it is the Examiner's position that one skilled in the art at the time the invention was made would have had a reasonable expectation of achieving similar regardless of the number of steps utilized as long as the process includes steps where a metal and amine complex are combined prior to reducing the metal complex.

With respect to the heating step, it is the Examiner's position that one skilled in the art at the time the invention was made would have had a reasonable expectation of achieving similar success regardless of the application of a heating step during the reducing step. If Applicant

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disagrees, Applicant is invited to supply a showing of unexpected results regarding the criticality of the claimed heating step. It is noted that the showing should support "unexpected" as the prior art clearly shows, while silent, that the process without a heating step is successful.

Response to Amendment

5. Applicant's arguments filed 7/3/06 have been fully considered but they are not persuasive.

Applicant arguments are similar to those in the previous Office Action and the Examiner's response is repeated below.

Applicant argued that the references fail when combine have to teach (5) steps required to arrive at the claimed invention and that there is no motivation or reason to combine the references as stated.

The Examiner disagrees. In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some logical reason why one skilled in the art would be motivated to make the proposed combination of references. *In Re Regel* 188 USPQ 136 (CCPA 1975). However, there is no requirement that the motivation to make the combination be expressly articulated in one or more of the references; the teaching, suggestion or inference can be found not only in the references but also from knowledge generally available to one of

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ordinary skill in the art. *Ashland Oil v. Delta Resins* 227 USPQ 657 (CAFC 1985). The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In Re McLaughlin* 170 USPQ 209 (CCPA 1971); *In Re Rosselet* 146 USPQ 183 (CCPA 1969). References are evaluated by what they collectively suggest to one versed in the art, rather than by their specific disclosures. *In Re Simon*, 174 USPQ 114 (CCPA 1972); *In Re Richman* 165 USPQ 509, 514 (CCPA 1970).

With respect to the heating step, this has been addressed above.

With respect to the solution being ink-jettable, the Examiner cited Miller which shows that ink-jetting catalyst/sensitizers/activators is known and that one skilled in the art would have a reasonable expectation of achieving similar success with either Tuttle (3,896,252) or Gedrat et al. (4,285,991) catalyst composition.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

 7/18/06

Brian K Talbot
Primary Examiner
Art Unit 1762

BKT